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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,278	10/21/2003	Greg A. Peek	1000-0013	4559

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EXAMINER	
ADDY, ANTHONY S	

ART UNIT	PAPER NUMBER
2617	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/690,278	PEEK, GREG A.	
	Examiner	Art Unit	
	Anthony S. Addy	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-21 are rejected under 35 U.S.C. 102(e) as being anticipated by **Chuah et al., U.S. Publication Number 2005/0059396 A1 (hereinafter Chuah)**.

Regarding claim 1, Chuah discloses a method (see Fig. 8) comprising: determining whether quality of service (QOS) can be improved for a group of wireless client devices (e.g. group of mobile hosts 150_{11} through 150_{nr}) in a wireless network (100) by moving at least one wireless client device in said group to another available channel (see p. 2 [0019-0020], p. 6 [0066] and p. 7 [0067]); and moving said at least one wireless client device to said another available channel when it is determined that QOS can be improved (see p. 6 [0066] and p. 7 [0067]).

Regarding claim 2, Chuah discloses all the limitations of claim 1. In addition, Chuah discloses a method, wherein: determining includes estimating current usage of transceivers that are available to service wireless client devices within said group (see *Chuah*, p. 6 [0066] and p. 7 [0067 & 0073]).

Regarding claim 3, Chuah discloses all the limitations of claim 1. In addition, Chuah discloses a method, wherein: determining includes analyzing data rates requested by wireless client devices within said group (see *Chuah*, p. 6 [0065-0066] and p. 7 [0067]).

Regarding claim 4, Chuah discloses all the limitations of claim 1. In addition, Chuah discloses a method, wherein: moving includes sending a command to said at least one wireless client device instructing said at least one wireless client device to move to said another available channel (see *Chuah*, p. 6 [0065-0066] and p. 7 [0067 & 0073]).

Regarding claim 5, Chuah discloses all the limitations of claim 1. In addition, Chuah discloses a method, wherein: determining is performed within a wireless access point and said group of wireless client devices includes wireless client devices being serviced by said wireless access point (see *Chuah*, p. 2 [0019-0020], p. 6 [0066], p. 7 [0067] and Fig. 1).

Regarding claim 6, Chuah discloses all the limitations of claim 5. In addition, Chuah discloses a method, wherein: said another available channel includes another channel supported by said wireless access point (see *Chuah*, p. 6 [0066] and p. 7 [0067 & 0073]).

Regarding claim 7, Chuah discloses all the limitations of claim 1. In addition, Chuah discloses a method, wherein: said another available channel includes at least one of: another channel supported by the same wireless access point that was previously servicing said at least one wireless client device and another channel

supported by a different wireless access point than the one that was previously servicing said at least one wireless client device (see *Chuah*, p. 6 [0066] and p. 7 [0067 & 0073])..

Regarding claim 8, Chuah discloses all the limitations of claim 1. In addition, Chuah discloses a method, wherein: moving said at least one wireless client device to said another available channel includes moving said at least one wireless client device to another frequency band (see *Chuah*, p. 6 [0066] and p. 7 [0067 & 0073]).

Regarding claim 9, Chuah discloses all the limitations of claim 1. In addition, Chuah discloses a method, wherein: moving said at least one wireless client device to said another available channel includes moving said at least one wireless client device from a first transceiver within an access point to a second transceiver within the access point (see *Chuah*, p. 6 [0066] and p. 7 [0067 & 0073]).

Regarding claim 10, Chuah discloses all the limitations of claim 9. In addition, Chuah discloses a method, wherein: said first transceiver follows a first wireless networking standard and said second transceiver follows a second wireless networking standard, wherein said second wireless networking standard is different from said first wireless networking standard (see *Chuah*, p. 2 [0020], p. 3 [0034-0035] and Fig. 4).

Regarding claim 11, Chuah discloses all the limitations of claim 9. In addition, Chuah discloses a method, wherein: said first transceiver and said second transceiver follow a common wireless networking standard (see *Chuah*, p. 2 [0020], p. 3 [0034-0035] and Fig. 4).

Regarding claim 12, Chuah discloses an apparatus (see Fig. 4; shows an access point 138) comprising: a first wireless transceiver to operate within a first channel (see p. 3 [0034-0035] and Fig. 4; shows an 802.11(a) transceiver operating within a first channel); a second wireless transceiver to operate within a second channel (see p. 3 [0034-0035] and Fig. 4; shows an 802.11(b) transceiver operating within a second channel), wherein said second channel is different from said first channel (see p. 3 [0035]); and a controller (*processor 402 reads on a controller*) to move a remote wireless client device (e.g. *mobile host 150, which reads on a remote wireless client device*) from said first channel to said second channel when it is determined that such a move can improve an overall quality of service being provided by said apparatus (see p. 6 [0066], p. 7 [0067] and Figs 1 & 4; shows a mobile host 150 and a processor 402).

Regarding claim 13, Chuah discloses all the limitations of claim 12. In addition, Chuah discloses an apparatus, further comprising: at least one other wireless transceiver to operate within at least one other channel, wherein said at least one other channel is different from said first and second channels (see *Chuah*, p. 3 [0034-0035] and Fig. 4).

Regarding claim 14, Chuah discloses all the limitations of claim 12. In addition, Chuah discloses an apparatus, wherein: said first wireless transceiver is configured in accordance with a first wireless networking standard and said second wireless transceiver is configured in accordance with a second wireless networking standard, wherein said first wireless networking standard is different from said second wireless networking standard (see *Chuah*, p. 2 [0020], p. 3 [0034-0035] and Fig. 4).

Regarding claim 15, Chuah discloses all the limitations of claim 12. In addition, Chuah discloses an apparatus, wherein: said first wireless transceiver and said second wireless transceiver follow a common wireless networking standard (see *Chuah*, p. 2 [0020], p. 3 [0034-0035] and Fig. 4).

Regarding claim 16, Chuah discloses all the limitations of claim 12. In addition, Chuah discloses an apparatus, wherein: said controller moves said remote wireless client device from said first channel to said second channel by sending a command to said remote wireless client device instructing said wireless client device to move to said second channel (see *Chuah*, p. 6 [0066] and p. 7 [0067 & 0073]).

Regarding claim 17, Chuah discloses all the limitations of claim 12. In addition, Chuah discloses an apparatus, wherein: said apparatus includes a wireless access point (see *Chuah*, p. 3 [0032] and Fig. 4; shows an access point 138).

Regarding claim 18, Chuah discloses an article comprising a storage medium (see abstract) having instructions stored thereon that, when executed by a computing platform, result in: determining whether quality of service (QOS) can be improved for a group of wireless client devices (e.g. group of mobile hosts 150_{11} through 150_{nr}) in a wireless network (100) by moving at least one wireless client device within said group to another available channel (see p. 2 [0019-0020], p. 6 [0066] and p. 7 [0067]); and moving said at least one wireless client device to said another available channel when it is determined that QOS can be improved (see p. 6 [0066] and p. 7 [0067]).

Regarding claim 19, Chuah discloses all the limitations of claim 18. In addition, Chuah discloses an article, wherein: determining includes estimating current usage of

transceivers that are available to service wireless client devices within said group (see *Chuah*, p. 6 [0065-0066] and p. 7 [0067 & 0073]).

Regarding claim 20, Chuah discloses all the limitations of claim 18. In addition, Chuah discloses an article, wherein: moving includes sending a command to said at least one wireless client device instructing said at least one wireless client device to move to said another available channel (see *Chuah*, p. 6 [0066] and p. 7 [0067 & 0073]).

Regarding claim 21, Chuah discloses all the limitations of claim 18. In addition, Chuah discloses an article, wherein: said another available channel includes at least one of: another channel supported by the same wireless access point that was previously servicing said at least one wireless client device and another channel supported by a different wireless access point than the one that was previously servicing said at least one wireless client device (see *Chuah*, p. 6 [0066] and p. 7 [0067 & 0073]).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chuah et al., U.S. Publication Number 2005/0059396 A1 (hereinafter Chuah)** and further in view of **Fox et al., U.S. Patent Number 6,879,807 (hereinafter Fox)**.

Regarding claim 22, Chuah teaches a system comprising: a first wireless transceiver, coupled to a first antenna, to operate within a first channel (see p. 3 [0034-0035] and Fig. 4; shows an 802.11(a) transceiver operating within a first channel); a second wireless transceiver, coupled to a second antenna, to operate within a second channel (see p. 3 [0034-0035] and Fig. 4; shows an 802.11(b) transceiver operating within a second channel), wherein said second channel is different from said first channel (see p. 3 [0035]); and a controller (*processor 402 reads on a controller*) to move a remote wireless client device (e.g. *mobile host 150, which reads on a remote wireless client device*) from said first channel to said second channel when it is determined that such a move can improve an overall quality of service being provided by said system (see p. 6 [0066], p. 7 [0067] and Figs 1 & 4; shows a mobile host 150 and a processor 402).

Chuah fails to explicitly teach said first and second antennas are dipole antennas coupled to said first wireless transceiver and said second wireless transceiver. However a dipole antenna coupled to a wireless transceiver in an access point is very well known in the art as taught for example by Fox.

In an analogous field of endeavor, Fox teaches a wireless access unit comprising a dipole antenna electrically coupled to a wireless transceiver (see col. 3, lines 20-28 & 57-66 and Figs. 1 & 2).

It would therefore have been obvious to one of ordinary skill in the art at the time of the invention to modify Chuah with the teachings of Fox to include a system, comprising: at least one first dipole antenna coupled to said first wireless transceiver; and at least one second dipole antenna coupled to said second wireless transceiver, in order to improve antenna reception and performance, which provides increased speed and bandwidth for a computing device, as well as an increased reliability in a wireless inter-connection to a remote network as taught by Fox (see col. 1, lines 33-35 and col. 5, lines 23-28).

Regarding claim 23, Chuah in view of Fox teaches all the limitations of claim 22. Chuah in view of Fox further teaches a system, further comprising: at least one other wireless transceiver to operate within at least one other channel, wherein said at least one other channel is different from said first and second channels (see *Chuah*, p. 3 [0034-0035] and Fig. 4).

Regarding claim 24, Chuah in view of Fox teaches all the limitations of claim 22. Chuah in view of Fox further teaches a system, wherein: said first wireless transceiver is configured in accordance with a first wireless networking standard and said second wireless transceiver is configured in accordance with a second wireless networking standard, wherein said first wireless networking standard is different from said second wireless networking standard (see *Chuah*, p. 2 [0020], p. 3 [0034-0035] and Fig. 4).

Regarding claim 25, Chuah in view of Fox teaches all the limitations of claim 22. Chuah in view of Fox further teaches a system, wherein: said first wireless transceiver

and said second wireless transceiver follow a common wireless networking standard (see *Chuah*, p. 2 [0020], p. 3 [0034-0035] and Fig. 4).

Regarding claim 26, Chuah in view of Fox teaches all the limitations of claim 22. Chuah in view of Fox further teaches a system, wherein: said controller moves said remote wireless client device from said first channel to said second channel by sending a command to said remote wireless client device instructing said remote wireless client device to move to said second channel (see *Chuah*, p. 6 [0066] and p. 7 [0067 & 0073]).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Stephens et al., U.S. Patent Number 7,197,315 discloses method and apparatus to select a channel using performance metrics.

Lyle et al., U.S. Patent Number 7,039,417 discloses apparatus, system, and method for mitigating access point data rate degradation.

Dacosta et al., U.S. Patent Number 7,257,407 discloses system and method for dynamically allocating data rates and channels to clients in a wireless network.

Cui et al., U.S. Publication Number 2004/0121749 A1 discloses system throughput enhancement using an intelligent channel association in the environment of multiple access channels.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony S. Addy whose telephone number is 571-272-7795. The examiner can normally be reached on Mon-Thur 8:00am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc M. Nguyen can be reached on 571-272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A.S.A

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